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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,490	07/25/2003	Manoharprasad K. Rao	FGT 1827 PA	1489
27256	7590	12/17/2004	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			LIEU, JULIE BICHNGOC	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/604,490

Applicant(s)

RAO ET AL.

Examiner

Julie Lieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/09/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-9, 11-16, 18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Schofield et al. (US Patent No. 6,498,620).

Claim 1:

Schofield et al. discloses a vision-based object detection system for a vehicle comprising:

- a. A plurality of vision sensing system 14, 16
- b. A controller 18 comprising a plurality of sensing system aid modules corresponding to each of the plurality of vision sensing systems, operating at least one of the plurality of sensing system aid modules in response to the at least one vehicle parameter (e.g. reverse or forward direction), and generating at least one safety system signal in response to the object detection signal (display); the plurality of sensing system aid modules have at least one operating mode (e.g. detecting mode) in response to the at least one vehicle parameter.

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Claim 2:

The plurality of vision sensing systems in Schofield is selected from at least one of a front and rear collision vision sensing system, a rearward collision vision sensing system, and a side collision vision sensing system. See fig. 1.

Claim 3:

The controller 18 operates the plurality of vision sensing system in at least one mode selected from reversing-aid mode, parking-aid mode, and a pre-collision sensing mode, and adaptive cruise control mode, a lane departure aid mode, and a lane-keeping aid mode.

Claim 6:

The plurality of sensing system aid modules in Schofield comprises a plurality of comfort and convenience modules.

Claim 7:

The plurality of comfort and convenience module comprises at least one module selected from a reversing-aid module and parking-aid module.

Claim 8:

Schofield discloses a gear sensor generating a transmission gear signal wherein the controller operates the plurality of sensing system aid modules in response to the transmission gear signal. That is display displays overlays 70a, 70b.

Claim 9:

The sensing system in Schofield comprises a side collisions sensing system and the controller continuously operates the side collision sensing system in a pre-collision sensing

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mode. That is, the side imaging sensors continuously takes images of the surrounding within its field of view.

Claim 11:

The sensing system in Schofield comprises at least one rearward collision sensing system and the controller operating the at least one rearward collision sensing system in at least one mode selected from a parking-aid mode, a reversing-aid mode, and a pre-collision sensing mode.

Claim 12:

The controller 18 is a single vision processor.

Claim 13:

The indicator 20 is electrically coupled to the controller and wherein the controller indicates the safety system signal via the indicator.

Claims 14-16:

The rejection of claims 14-20 recites the rejection of claims 1, 8, and 9, respectively, except they are method claims.

Claim 18:

The rejection of claim 18 recites the rejection of claim 11, except it is a method claim.

Claim 20:

Schofield discloses a vision-based object detection system for a vehicle comprising:

- a. Transmission gear sensor generating a transmission gear signal (col. 17 line 29-31)
- b. A plurality of vision sensing systems 14, 16 having at least one vision receiver, generating an object detection signal, and operating simultaneously in a plurality of

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modes selected from a reversing-aid mode, a parking-aid mode, a pre-collision sensing mode, an adapted cruise control mode, a lane departure aid mode, and a lane-keeping aid mode; and

c. A single vision processor 18 comprising a plurality of sensing system aid modules corresponding with each of the plurality of vision sensing systems, operating the plurality of sensing system aid modules in response to the transmission gear signal, and generating at least one warning signal or one countermeasure signal in response to the object detection signal.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield et al. (US Patent No. 6,498,620) in view of King (US Patent Application 2004/0061598).

Claim 4:

Schofield fails to countermeasure modules. However, the idea of using countermeasure devices is well known in the art as shown in King. Thus, one skilled in the art would have readily recognized the desirability of incorporating a countermeasure device in the system of Schofield because it would enhance the safety feature.

Claim 5:

The plurality of collision avoidance and countermeasure modules comprises at least one module (e.g. backup sensing module working in conjunction with the display to form a collision avoidance and countermeasure module) selected from a sensing systems in at least one mode selected from a pre-collision sensing mode, and adaptive cruise control module, a lane departure aid module, and a lane-keeping aid module.

5. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield et al. (US Patent No. 6,498,620).

Claim 10:

The plurality of vision sensing system in Schofield does not include a frontal collisions sensing system. However, it would have been obvious to one skilled in the art to add one in the Schofield system because it would further enhance safety. In addition, the controller in this modified Schofield system operates the frontal collision sensing system in at least one mode

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selected from a parking-aid mode, a pre-collision sensing mode, an adaptive cruise control mode, a lane departure aid mode, and a lane-keeping aid mode.

Claim 17:

The rejection of claim 17 recites the rejection of claim 10, except it is a method claim.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield et al. (US Patent No. 6,498,620) in view of Okamoto (US Patent No. 6,587,760).

Claim 20:

Schofield fails to disclose determining the vehicle velocity and operating the sensing system aid modules in response thereto. Nonetheless, the idea is well known in the art as evidenced in Okamoto wherein the system determine the speed and the steering angle to provide message according thereto. Thus, it would have been obvious to one skilled in the art to employ this teaching in the system of Schofield because it is useful in providing information to a driver, especially when the vehicle is driven the reverse direction.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schofield et al., US Patent No. 6,222,447, discloses rearview vision system with indicia of backup travel.

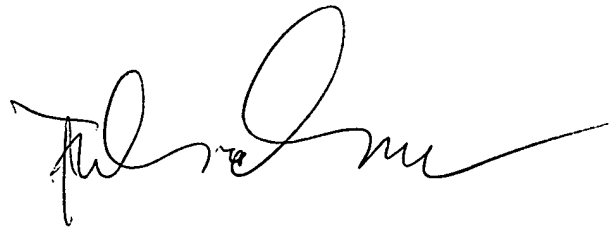
Tanaka et al, US Patent No. 6,487,481, discloses a parking assisting apparatus.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on Mon-Fri 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Julie Lieu', with a long horizontal flourish extending to the right.

Julie Lieu
Primary Examiner
Art Unit 2636

Dec. 07, 04